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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,477	04/20/2001	Lorin R. Debonte	07148-094001 / A15-502	2474

7590

09/24/2002

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EXAMINER

MCELWAIN, ELIZABETH F

ART UNIT

PAPER NUMBER

1638

DATE MAILED: 09/24/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/839,477

Applicant(s)

DEBONTE ET AL.

Examiner

Elizabeth McElwain

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Claims 1-39 are pending.

The IDS filed August 23, 2001 has been considered.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the  
5 basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed  
publication in this or a foreign country, before the invention thereof by the applicant for a patent.

10 (b) the invention was patented or described in a printed publication in this or a foreign country or in public  
use or on sale in this country, more than one year prior to the date of application for patent in the United  
States.

(c) the invention was described in-

15 (1) an application for patent, published under section 122(b), by another filed in the United States before  
the invention by the applicant for patent, except that an international application filed under the treaty defined in  
section 351(a) shall have the effect under this subsection of a national application published under section 122(b)  
only if the international application designating the United States was published under Article 21(2)(a) of such treaty  
in the English language; or

20 (2) a patent granted on an application for patent by another filed in the United States before the invention by  
the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this  
subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 17-19, 24, and 31-35 are rejected under 35 U.S.C. 102(a) or (e) as being  
anticipated by Ohlrogge et al (U.S. Patent 5,925,805).

25 The claims are drawn to a method of producing a plant by transforming a plant with a  
construct comprising a nucleic acid encoding a cytosolic ACCase operably linked to a promoter  
and selecting for plants with increased oil content that is statistically significant. In addition,  
claims are drawn to said method further comprising a transit peptide operably linked to the  
ACCase, and to transformed Brassica.

Ohlrogge et al teach a method of producing a plant by transforming a plant, including *Brassica napus*, with a construct comprising a nucleic acid encoding a cytosolic ACCase operably linked to a promoter and selecting for plants with a statistically significant increase in oil content (see columns 14-23, especially column 23). Ohlrogge et al also teach use of a transit peptide coding sequence in the construct operably linked to the ACCase coding sequence (column 18, for example).

Claims 36-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Shorrosh et al (PNAS 91:4323-4327, May 1994).

The claims are drawn to nucleic acid constructs comprising a cytosolic ACCase gene operably linked to a promoter, wherein the nucleic acid does not encode a transit peptide or include introns.

Shorrosh et al teach an alfalfa cytosolic (cytoplasmic) ACCase cDNA, wherein cDNAs lack introns, and coding sequence for a transit peptide is not present (see pages 4324-4325, and page 4326 at the second to last full paragraph).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-39 are rejected under 35 U.S.C. 103(a) as being obvious over Ohlrogge et al (U.S. Patent 5,925,805) taken with Shorrosh et al (PNAS 91:4323-4327, May 1994) and in view of Gegenbach et al (U.S. Patent 5,498,544).

The claims are drawn to a method of producing a plant by transforming a plant with a construct comprising a nucleic acid encoding a cytosolic ACCase operably linked to a promoter and selecting for plants with increased oil content that is statistically significant. In addition, claims are drawn to said method further comprising a transit peptide operably linked to the ACCase, and to transformed Brassica.

Ohlrogge et al teach a method of producing a plant by transforming a plant, including *Brassica napus*, with a construct comprising a nucleic acid encoding a cytosolic ACCase operably linked to a promoter and selecting for plants with a statistically significant increase in oil content (see columns 14-23). Ohlrogge et al also teach use of a transit peptide coding sequence in the construct operably linked to the ACCase coding sequence (column 18, for

example), and use of a seed specific promoter, such as a napin promoter (column 15). In addition, Ohlrogge et al teach a cytosolic ACCase cDNA, which inherently would not include introns (column 8, line 50 to column 9, line 5).

5 Ohlrogge et al do not specifically teach a construct without a transit peptide coding sequence and without introns for plant transformation. Ohlrogge et al also do not teach an alfalfa cytosolic ACCase coding sequence.

Shorrosh et al teach an alfalfa cytosolic (cytoplasmic) ACCase cDNA, wherein cDNAs lack introns, and coding sequence for a transit peptide is not present (see pages 4324-4325, and page 4326 at the second to last full paragraph).

10 Gegenbach et al teach the desirability of using an ACCase coding sequence with or without a transit peptide and with or without introns for the transformation of a plant with an ACCase coding sequence for the purpose of increasing the oil concentration in the plant (see columns 32-34). Gegenbach et al also teach use of a CaMV 35S promoter.

15 Given the recognition of those of ordinary skill in the art of the value of transforming a plant with a cytosolic ACCase coding sequence to produce a plant having a statistically significant increase in oil concentration, as taught by Ohlrogge et al and Gegenbach et al, it would have been obvious to one of ordinary skill in the art to use the methods taught by Ohlrogge et al and to modify them by substituting another cytosolic ACCase coding sequence, such as the alfalfa cytosolic ACCase coding sequence without a transit peptide and introns that is  
20 taught by Shorrosh, particularly in view of the teachings of Gegenbach et al of the use of ACCase coding sequences with or without transit peptides and with or without introns. Thus the claimed

invention would have been prima facie obvious as a whole at the time it was made to one of ordinary skill in the art, especially in the absence of evidence to the contrary.

No claims are allowed.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth F. McElwain whose telephone number is (703) 308-1794. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM.

10 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at (703) 306-3218. The fax phone number for this Group is (703) 308-4242. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989).

15 Any inquiry of a general nature or relating to the status of this application should be directed to the legal analyst, Gwendolyn Payne, whose telephone number is (703) 305-2475, or to the Group receptionist whose telephone number is (703) 308-0196.

20 Elizabeth F. McElwain, Ph.D.  
September 20, 2002

  
ELIZABETH F. McELWAIN  
PRIMARY EXAMINER  
GROUP 1600